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PATENT TRADEMARK OFFICE

Patent  
Case No.: 57211US005

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



First Named Inventor: SCHARDT, CRAIG R.

Application No.: 10/608930

Group Art Unit: Unknown

Filed: June 27, 2003

Examiner: Unknown

Title: SILICATE GLASS FOR UPCONVERSION FLUORESCENCE

INFORMATION DISCLOSURE STATEMENTCommissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

## CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on:

9-11-03  
Date  
Signed by: Tom Sanders

Dear Sir:

Pursuant to 37 CFR §§ 1.56, 1.97, and 1.98, enclosed is a completed Form PTO-1449, citing references submitted for consideration by the Examiner. A copy of each cited reference is also enclosed. It is respectfully requested that the Examiner initial and return the enclosed Form PTO-1449 to indicate that each reference has been considered.

It is believed that no fee is due; however, in the event a fee is required, please charge the fee to Deposit Account No. 13-3723.

Respectfully submitted,

September 11, 2003  
DateBy: Melanie Gover  
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# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets if necessary)

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Application Number	10/608930
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First Named Inventor	Craig R. Schardt
Art Unit	Unknown
Examiner Name	Unknown
Attorney Case Number	57211US005

## OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Exam. Init.*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published
	C5	J.R. LINCOLN, et al; "Time Resolved and Site Selective Spectroscopy of Thulium Doped Into Germano- and Alumino-Silicate Optical Fibres and Preforms", <i>Journal of Luminescence</i> (1991); Vol. 50; pp. 297-308
	C6	"Lucent Technologies announces two new erbium-doped fibers for the extended L-band the C-band"; Lucent Technologies [online]; [available on the internet October 1, 2001]; [retrieved from the internet January 23, 2003 at <a href="http://www.lucent.com/press/1001/011001.nsf.html">www.lucent.com/press/1001/011001.nsf.html</a> ]
	C7	D.N. MESSIAS, et al; "Blue Energy Upconversion Emission in Thulium-Doped SiO <sub>2</sub> -P <sub>2</sub> O <sub>5</sub> Channel Waveguides Excited at 1.064 $\mu$ m", <i>IEEE Journal of Quantum Electronics</i> (Dec. 2002); Vol. 38, No. 12; pp. 1647-1650
	C8	A. MORI, et al; "1.5 $\mu$ m Broadband Amplification by Tellurite-Based EDFAs"; <i>Conference on Optical Fiber Communications, Technical Digest, Postconference Ed.</i> OSA Technical Digest Series (1997); Vol. 6; pp. 371-374; Optical Society of America
	C9	R.L. SHUBOCHKIN, et al; "Er <sup>3+</sup> - Tm <sup>3+</sup> Co-doped Silica Fiber Laser"; <i>OSA TOPS</i> (1999); Vol. 26 Advanced Solid-State Lasers; pp. 167-171; Optical Society of America
	C10	A.P. OTTO, et al, "Red to Blue Upconversion in Tm-Doped Sol-Gel Silicate Glasses"; <i>Journal of Non-Crystalline Solids</i> (2000); Vol. 265; pp. 176-180
	C11	S. TANABE & E. SNITZER, "Blue Upconversion Characteristics of Thulium-Doped Silica Fiber with High Germania Content"; <i>Japan Journal of Applied Physics</i> (1998); Vol. 37, Suppl., 37-1; pp. 81-83
	C12	M.V.D. VERMELHO, et al; "Efficient and Thermally Enhanced Frequency Upconversion in Yb <sup>3+</sup> -Sensitized Tm <sup>3+</sup> -Doped Silica-on-Silicon Buried Waveguides Excited at 1.064 $\mu$ m"; <i>Optical Materials</i> (2001); Vol. 17; pp. 419-423
	C13	X. ZOU, et al; "Mechanisms of Upconversion Fluorescences in Er <sup>3+</sup> , Tm <sup>3+</sup> Codoped Fluorozirconaluminate Glasses"; <i>Journal of Non-Crystalline Solids</i> (1995); Vol. 181; pp. 100-109

\*Examiner:

Date Considered:

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Craig R. Schardt

Art Unit

Unknown

Examiner Name

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(Use as many sheets if necessary)

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## U.S. Patent Documents

Exam. Init.*	Cite No.	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code (if known)			
	A1	US- 5,388,110	02-07-1995	Snitzer	
	A2	US- 5,426,656	06-20-1995	Tohmon et al	
	A3	US- 6,154,598	11-28-2000	Gavrilovic et al	
	A4	US- 6,463,201 B2	10-08-2002	Aiso et al	
	A5	US- 2002/0021882 A1	02-21-2002	Wyatt et al	
	A6	US- 2002/0064366 A1	05-30-2002	Cole et al	
	A7	US-			
	A8	US-			

## Foreign Patent Documents

Exam. Init.*	Cite No.	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	Translation (Check if yes)
		Ctry. Code	Number-KindCode (if known)				
	B1	JP	04-349141 /	12-03-1992			X
	B2	JP	07-058399 /	03-03-1995			X
	B3	JP	2001-210898 /	08-03-2001			X
	B4	KR	2000-0027961 /	05-15-2000			X
	B5	WO	00/55101 /	09-21-2000			
	B6	WO	03/002475 A1 /	01-09-2003			
	B7						

## OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Exam. Init.*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published
	C1	J.R. BONAR, et al; "Blue Light Emission in Thulium Doped Silica-on-Silicon Waveguides", <i>Optics Communications</i> (1 Sept. 1997); Vol. 141, pp. 137-140
	C2	A.F. EL-SHERIF & T.A. KING; "Dynamics and Self-Pulsing Effects in Tm <sup>3+</sup> -Doped Silica Fibre Lasers", <i>Optics Communications</i> (15 July 2002); Vol. 208; pp. 381-389
	C3	D.C. HANNA, et al; "Frequency Upconversion in Tm- and Yb : Tm-Doped Silica Fibers", <i>Optics Communications</i> (15 Aug. 1990); Vol. 78, No. 2; pp. 187-194
	C4	H. JEONG & K. OH; "Characterization of Amplified Spontaneous Emission Light Source from an Er <sup>3+</sup> /Tm <sup>3+</sup> Co-doped Silica Fiber"; <i>Conference on Lasers and Electro-Optics, Technical Digest, Postconference Ed.</i> (May 7-12, 2000); TOPS Vol. 39; pp. 544-545; Optical Society of America

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